



Joseph C. Cavender
Vice President & Assistant General Counsel
Federal Regulatory Affairs
1099 New York Ave NW Suite #250
Washington, DC 20001
Tel: (571) 730-6533
joseph.cavender@centurylink.com

September 23, 2019

Ex Parte

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Expanding Flexible Use of the 3.7 to 4.2 GHz Band, GN Docket No. 18-122

Dear Ms. Dortch:

CenturyLink supports the Commission's efforts to transition C-Band spectrum to terrestrial use, including for 5G services, and urges the Commission to take bold steps to ensure that sufficient spectrum is reallocated to support robust service and vigorous competition.¹

Some commenters have expressed concern about any proposal that would envision relocating linear television programming delivery from programmers to MVPDs from the C-Band to terrestrial alternatives such as fiber. In CenturyLink's experience, however, terrestrial delivery is a reliable, practical way to distribute MVPD programming. Indeed, CenturyLink provides such video distribution services today in a host of settings.

For example, CenturyLink Vyvx Linear Channel Distribution service today provides programmers and distributors the ability to deliver channels across a variety of platforms,

¹ As CenturyLink has previously stated, whatever specific approach the Commission might take, it should ensure that incumbents are appropriately protected from interference, and, to the extent incumbent users may incur costs in connection with the transformation of the band, those costs should be covered by the proceeds that result from the reallocation. *See generally* Reply Comments of CenturyLink, GN Docket No. 18-122 (filed Dec. 10, 2018).

including directly over fiber to many MVPDs as well as over-the-top video providers.² For CenturyLink's demanding customers, which include some of the largest, best known content companies around the globe, quality and reliability are critical. They trust CenturyLink Vyvx services to deliver, and CenturyLink Vyvx has built its reputation by doing just that for decades.

CenturyLink expects the market for terrestrial delivery services to continue to grow as more and more programmers and MVPDs seek to capture the benefits such delivery offers, regardless of what the Commission does in this proceeding. CenturyLink's extensive U.S. fiber network already reaches many programmers, data centers, and MVPDs, and CenturyLink continues to invest billions of dollars of capital each year, with a key priority to deploy more fiber and reach more enterprise destinations every year—in fact, CenturyLink put almost 10,000 buildings on its fiber network in just the first 6 months of 2019. If the Commission adopts the joint proposal from ACA, CCA, and Charter, CenturyLink anticipates competing aggressively to provide services to those transitioning from C-Band delivery. On the other hand, if the Commission adopts the proposal from the C-Band Alliance, CenturyLink is confident that programmers and MVPDs will continue to explore and adopt terrestrial delivery options.

The choices the Commission makes in this proceeding will have an impact not just on America's 5G future, but the future of video transmission services as well. As it evaluates the proposals in the record, the Commission can be confident that providers like CenturyLink will be able to deliver robust, reliable, scalable solutions for terrestrial delivery of linear programming, because we are doing it today.

Please contact the undersigned if you have any questions.

Sincerely,

/s/ Joseph C. Cavender
Joseph C. Cavender

² See CenturyLink Vyvx Linear Channel Distribution, Data Sheet, attached hereto and available at <https://www.centurylink.com/asset/business/enterprise/brochure/en-vyvx-br-linear-channel-distribution-br180035.pdf>. CenturyLink's Linear Channel Distribution service also delivers content over satellite.

Attachment

Vyvx Channel Distribution delivers quick, easy and flexible multi-point distribution of TV channels with a single contribution feed.

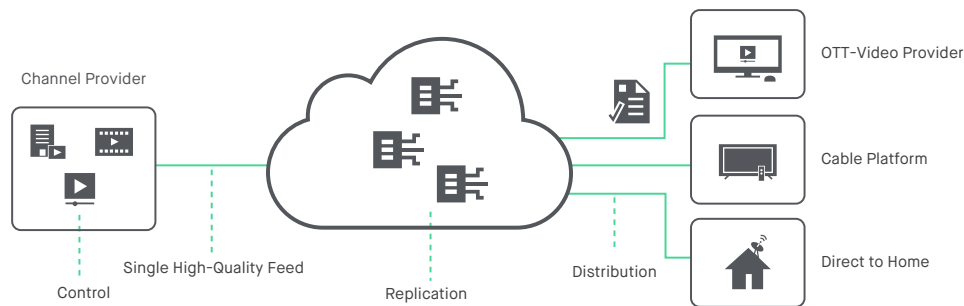
Traditionally, the market for full-time television distribution services has been dominated by satellite services requiring significant compression, latency, expense and operational overhead — with limited scalability. Multichannel video program distributors (MVPDs) are seeking to reduce costs, and over-the-top (OTT) video providers have created a new market for the delivery of full-time channels. These eyeball-reaching content distributors require a scalable, fiber-based solution to manage business growth while minimizing infrastructure investment and operational complexity.

Now with CenturyLink Vyvx Linear Channel Distribution, a single high-quality feed can be replicated and delivered to multiple end points across our global fiber network, reliably and securely. This fast, scalable solution provides both programmers and distributors with the ability to rapidly turn up new channels. In addition to offering a simplified operational environment and increased visibility of channels, Vyvx Linear Channel Distribution can include built-in network-based redundancy to help meet today's business requirements.

Solutions

Service Benefits

- **Quality:** By starting with a single high-quality, secure, network-redundant feed, we deliver the highest quality video possible to benefit both broadcasters and MVPDs. Fiber-based Vyvx Linear Channel Distribution doesn't suffer from the signal artifacts and latency associated with satellite-based distribution.
- **Reliability:** We provide a robust, global network for professional video over fiber. CenturyLink's experienced team of broadcast professionals are trusted by some of the largest content companies around the globe. And optional diversity in replication helps raise the standards for a highly available service that meets even the most demanding SLA needs.
- **Cost-Effectiveness:** Leveraging a single feed that can be replicated to multiple end points across the Vyvx network results in a standardized, simplified and consistent operational model for both broadcasters and MVPDs.
- **Scalability:** Content providers and subscribers alike benefit from the ability for rapid channel turn up — both to meet business requirements for new content, and to remain more agile where time to market for content is critical. And our fiber-based network can be scaled to deliver bandwidth-intensive, next-generation formats with ease.
- **Global Reach:** MVPDs and OTT video providers can expand their channel lineup with access to the Vyvx on-net global community of broadcasters, rights holders, cable TV channels, local stations, live encoding/media platforms and more. As the live TV viewing market evolves across more devices and locations than ever before, broadcasters can leverage linear channel distribution to reach new markets by delivering their programming to strategic MVPDs and OTT video providers.



Additional Benefits for Programmers

- **Control:** New portal enhancements provide more control and visibility of your available channels, subscriptions, transport streams and alarm correlation than ever before.
- **Flexibility:** Vyx Linear Channel Distribution can support both satellite and fiber acquisition. The solution provides optional redundancy and diversity scenarios, enabling organizations to move off of legacy satellite-based technology.

Additional Benefits for Content Subscribers

- **Consistency:** Benefit from a single source provider while keeping operations efficient.
- **Visibility:** View a list of available channels from numerous programmers under the Vyx Linear Channel Distribution service offering.*

Technical Features/Capabilities

- Support for single or multi-program transport streams with the ability to deliver complete transport stream and or individual channels as needed
- Support for ASI, SD-SDI, HD-SDI and IP inputs and outputs
- Optional MPEG2 and MPEG4 encoding and decoding available
- Portal View provides:
 - View of available channels
 - Reservation dashboard enhanced to support ability to see subscriptions to transport streams
 - Ability for content owners to manage subscriptions

Enhanced Service Management Capability:

- Automated best path replication selection
- Ability to designate specific replicators
- Greater service management visibility into replication zones
- Enhanced bandwidth support for UDP/RTP scenarios

Why Choose CenturyLink for Linear Channel Distribution Service?

A deeper solutions portfolio: Gain efficiencies and value from working with a single provider that offers an extensive range of end-to-end video solutions. With more than 30 years of video delivery experience, CenturyLink is committed to being your single point of assurance for security, performance and support.

24/7 dedicated support: Our experienced broadcast support professionals are available when you need them. High-quality management, monitoring and customer service from our team of video technicians means you can focus on what you do best.

Agile: CenturyLink delivers global fiber, teleport/satellite video delivery for linear channels. Quick and free online service booking is available with access to online reports, reservation confirmations, goodnights and invoices.

Reliable, secure and scalable delivery of video around the globe: With a culture of security and a passion for reliability, CenturyLink delivers quality broadcast video service for customers at any scale globally.

*Subject to content rights agreement between rights holder and pay TV/digital TV service provider